Title (en)

PROCESS FOR ABATING NITROGEN OXIDE EMISSIONS FROM A MANUFACTURING STREAM

Title (de)

PROZESS ZUR VERMINDERUNG VON STICKOXID EMISSIONEN AUS EINEM PROZESSSTROM

Title (fr)

PROCEDE POUR REDUIRE LES EMISSIONS D'OXYDES D'AZOTE PROVENANT D'UN COURANT DE FABRICATION

Publication

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Application

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Priority

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- US 96089597 A 19971030

Abstract (en)

[origin: WO9922847A1] The present invention provides a process for abating emissions from a manufacturing stream comprising the steps of: a) from the manufacturing stream, feeding the emissions comprising NOx (20) to a scrubbing reactor (22); b) to the emissions in the scrubbing reactor, adding alkali solution (28) and NO2 (24) in an amount sufficient so that a substantial amount of the NOx forms ammonium nitrite or ammonium nitrate while maintaining the pH of the formed ammonium nitrite solution at greater than about 7.5 and vent gas comprising mist exits from the scrubbing reactor; c) maintaining the temperature of the vent gas at less than about 40 DEG C; and d) removing the mist from the vent gas (42). The formed ammonium nitrite (and ammonium sulfite if formed) may be used as intermediate chemicals since they are unstable and will eventually break down into ammonium nitrate and ammonium sulfate respectively. The formed ammonium nitrate and ammonium sulfate may be sold as fertilizers.

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